APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/435,940	11/09/1999	LEWIS V. ROTHROCK	042390.P5387	5902

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MATTHEW C FAGAN
BLAKELY SOKOLOFF TAYLOR & ZAFFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 900251026

EXAMINER
WALLACE, SCOTT A

ART UNIT	PAPER NUMBER
2671	18

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

Office Action Summary		Application No.	Applicant(s)
		09/435,940	ROTHROCK, LEWIS V.
		Examiner	Art Unit
		Scott Wallace	2671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _10 December 2002_ .

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-43_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-43_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _4, 6, 15_ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Response to Arguments

In response to applicant's argument that Herman does not teach purging the memory of the at least two

digital images at the first resolution level, the applicant does not disclose when the purging is supposed to

take place. There is not sequence of the events and therefore since Herman is done on a computer

system, just shutting down the computer like is done at the end of a day would purge the memory or if two

new images were brought together this would purge the old images in favor of the new images.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as
> set forth in section 102 of this title, if the differences between the subject matter sought to be
> patented and the prior art are such that the subject matter as a whole would have been obvious
> at the time the invention was made to a person having ordinary skill in the art to which said
> subject matter pertains. Patentability shall not be negatived by the manner in which the invention
> was made.

2.   Claims 1, 6-9, 14-17, 22-25, 27-33, 38-39 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Herman et al., U.S. Patent No. 6,075,905.

3.   As per claim 1,9, 17 and 25, Herman teaches identifying where at least two digital images overlap

at a first resolution level (column 1 lines 60-64 and column 5 lines 57-63); dividing each of the at least two

digital images into a plurality of areas at a second resolution level higher than the first resolution level

(column 9 lines 3-13 and 21-25); and identifying where the overlapping ones of the areas at the second

resolution level overlap (column 9 lines 3-13). However, Herman does not specifically mention purging

the memory of the at least two digital images at the first resolution level. It would have been obvious to

one of ordinary skill in the art at the time the invention was made to purge the images because Herman

uses a computer system and it was well known that shutting off a computer like at the end of a day would

purge memory or if two new images were used this would purge out the old images.

4.   As per claim 6,14, 22 and 27, Herman teaches combining the at least two digital images (column 5 lines 56-63).

5.   As per claim 7 and 23, Herman teaches identifying where the at least two digital images overlap at one or more resolution levels higher than the second resolution level (column 1 lines 60-65 and column 5 lines 56-63).

6.   As per claim 8, 16, and 24, Herman teaches identifying where another set of at least two digital images overlap at the first resolution level (column 1 lines 60-64 and column 5 lines 57-63); dividing each image of the other set of at least two digital images into a plurality of areas at the second resolution level (column 9 lines 3-13 and 21-25); identifying where overlapping ones of the areas of the other set of at least two digital images at the second resolution level overlap (column 9 lines 3-13); and combining the digital images (column 5 lines 56-63).

7.   As per claim 15, Herman teaches wherein identifying where the at least two digital images overlap at one or more resolution levels higher than the second resolution level (column 2 lines 2-8 and column 5 lines 56-63).

8.   As per claim 28,29, 30 and 31, Herman teaches wherein the dividing comprises dividing each of the at least two digital images at the second resolution level into a plurality of tiles each having a size less than a threshold size (column 9 lines 3-13).

9.   As per claim 32, Herman teaches identifying where at least two digital images overlap at a first resolution level (column 1 lines 60-64 and column 5 lines 57-63); dividing each of the at least two digital images into a plurality of areas at a second resolution level higher than the first resolution level (column 9 lines 3-13 and 21-25); identifying overlapping ones of the areas at the second resolution level based on where the at least two digital images overlap at the first resolution level (column 9 lines 3-13 and 21-25); identifying where the overlapping ones of the areas at the second resolution level overlap (column 9 lines 3-13); dividing each of the at least two digital images into a plurality of areas at a third resolution level higher than the second resolution level (column 9 lines 3-13); identifying overlapping ones of the areas at the third resolution level based on where the overlapping ones of the areas at the second resolution level

overlap (column 9 lines 3-13); identifying where the overlapping ones of the areas at the third resolution

level overlap (column 9 lines 3-13); and combining the at least two digital images (column 5 lines 56-63).

As per claim 33, Herman teaches wherein the dividing each of the at least two digital images into a

plurality of areas at the second resolution level comprises dividing each of the at least two digital images

at the second resolution level into a plurality of tiles each having a size less than a threshold size (column

9 lines 3-13); and wherein the dividing each of the at least two digital images into a plurality of areas at

the third resolution level comprises dividing each of the at least two digital images at the third resolution

level into a plurality of tiles each having a size less than the threshold size (column 9 lines 3-13).

10.   As per claim 38, Herman teaches identifying where at least two digital images overlap at a first

resolution level (column 1 lines 60-64 and column 5 lines 57-63); dividing each of the at least two digital

images into a plurality of areas at a second resolution level higher than the first resolution level (column 9

lines 3-13 and 21-25); identifying overlapping ones of the areas at the second resolution level based on

where the at least two digital images overlap at the first resolution level (column 9 lines 3-13); identifying

where the overlapping ones of the areas at the second resolution level overlap (column 9 lines 3-13);

dividing each of the at least two digital images into a plurality of areas at a third resolution level higher

than the second resolution level (column 9 lines 3-13); identifying overlapping ones of the areas at the

third resolution level based on where the overlapping ones of the areas at the second resolution level

overlap (column 9 lines 3-13); identifying where the overlapping ones of the areas at the third resolution

level overlap (column 9 lines 3-13); and combining the at least two digital images (column 5 lines 56-63).

11.   As per claim 39, Herman teaches wherein the dividing each of the at least two digital images into

a plurality of areas at the second resolution level comprises dividing each of the at least two digital

images at the second resolution level into a plurality of tiles each having a size less than a threshold size

(column 9 lines 3-13); and wherein the dividing each of the at least two digital images into a plurality of

areas at the third resolution level comprises dividing each of the at least two digital images at the third

resolution level into a plurality of tiles each having a size less than the threshold size (column 9 lines 3-13).

Claim Rejections - 35 USC § 103

12.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13.   Claims 2-5, 10-13, 18-21, 26, 34-37, and 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herman et al. in view of Mann et al., U.S. Patent No. 5,706,416.

1.   As per claim 2, 10, 18, 34, and 40, Herman teaches all the limitations of claim 1 as seen above. Herman does not specifically teach wherein each of the at least two digital images are stored at the first and second resolution levels. Mann does teach this in column 14 lines 55-67. It would have been obvious to one of ordinary skill in the art to use the memory of Mann with the system of Herman. Mann uses this memory for relating and combining multiple images. Herman also combines images based on related parts between them. Herman does mention containing a buffer frame in Fig. 8. It was well known in the art at the time of the invention that these buffers could store the images at different resolutions as seen in Mann. Herman does not specifically disclose storing images at different resolutions, but does contain the buffers that were well known to do this. This would have allowed displaying the images quicker and more efficiently.

14.   As per claim 3, 11, 19, 26, 35, and 41, Herman teaches all the limitations of claim 1 as seen above. Herman does not teach storing the at least two digital images at the first resolution level in memory to identify where the at least two digital images overlap at the first resolution level; purging the

memory of the at least two digital images at the first resolution level; and storing the overlapping areas at the second resolution level in the memory to identify where the overlapping areas at the second resolution level overlap. Mann teaches storing of the images at the first resolution and storing the overlap areas at the second resolution in column 14 lines 55-67. Although Mann does not specifically mention purging the memory, this would have been obvious to one of ordinary skill in the art, because the memory would have to get purged so the data that is left there does get mixed with the new data since we are dealing with combining images. I It would have been obvious to one of ordinary skill in the art to use the memory of Mann with the system of Herman. Mann uses this memory for relating and combining multiple images. Herman also combines images based on related parts between them. Herman does mention containing a buffer frame in Fig. 8. It was well known in the art at the time of the invention that these buffers could store the images at different resolutions as seen in Mann. Herman does not specifically disclose storing images at different resolutions, but does contain the buffers that were well known to do this. This would have allowed displaying the images quicker and more efficiently.

15.   As per claim 4-5, 12-13, 20-21, 36-37, and 42-43, Herman teaches all the limitations of claim 1 as seen above. Herman does not teach identifying the overlapping areas of the first and second resolution using the identified coordinates and an edge detection technique. Mann teaches this in column 3 lines 26-46 and column 8 lines 7-67. It would have been obvious to one of ordinary skill in the art to use the overlap detection means of Mann with the system of Herman. This would have been obvious because the system of Herman needs a way of detecting where the overlap is. The easiest way was using coordinates. This was well known in the art at the time of the applicant's invention. Identifying the coordinates is related to edge detection technique according to the applicant's specification. This was the most efficient way to find the areas of overlap at the time the invention was made, that is why Herman would have incorporated this in his system.

16.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office

action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of

the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from

the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date

of this final action and the advisory action is not mailed until after the end of the THREE-MONTH

shortened statutory period, then the shortened statutory period will expire on the date the advisory action

is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX

MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should

be directed to **Scott Wallace** whose telephone number is **703-605-5163**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Mark Zimmerman, can be reached at 703-305-9798.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA,

Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be

directed to the Technology Center 2600 Customer Service Office whose telephone number is

(703) 306-0377.

MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600